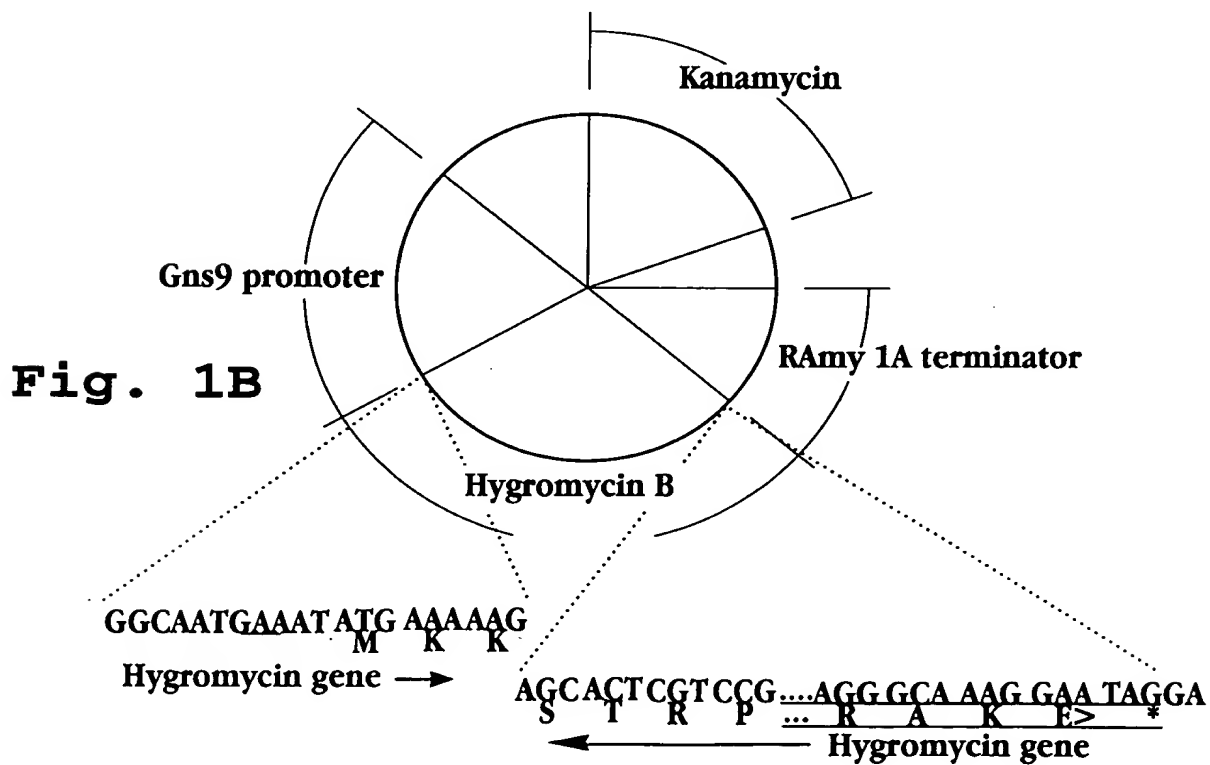
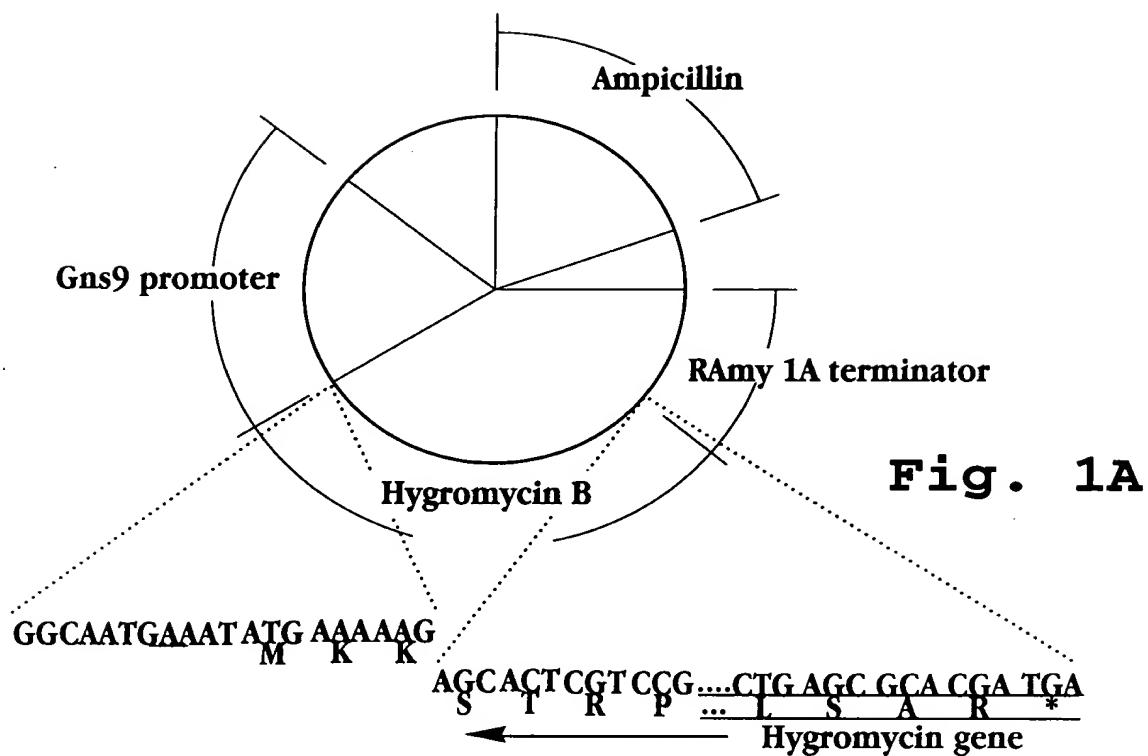


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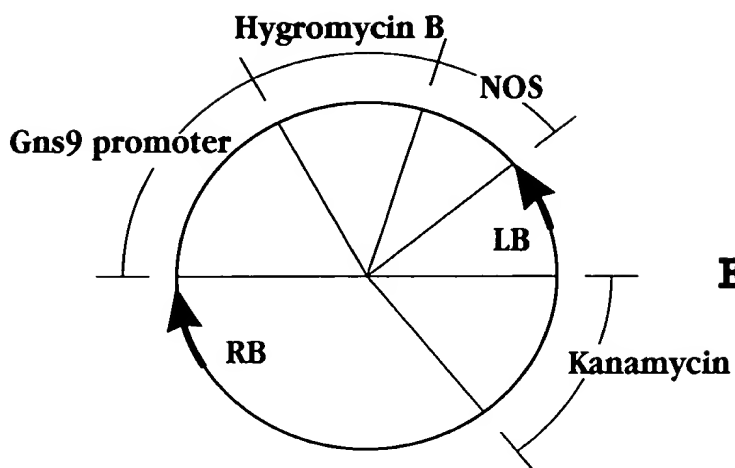


Fig. 1C

Fig. 3A

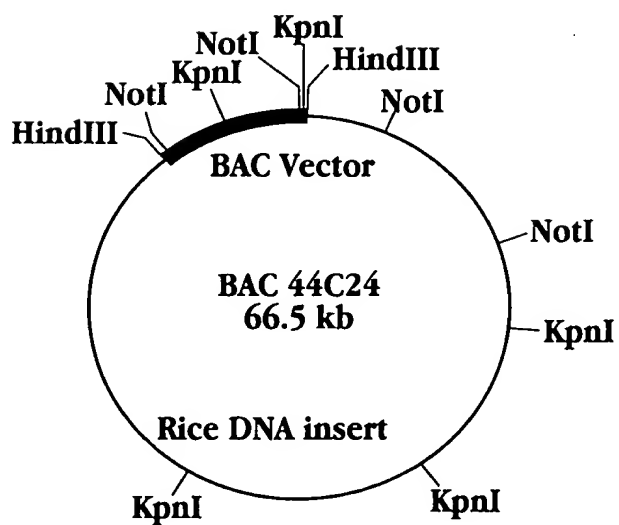
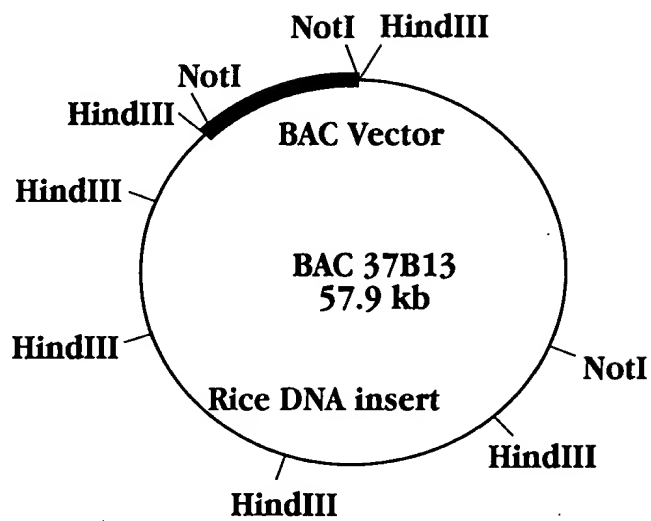


Fig. 3B

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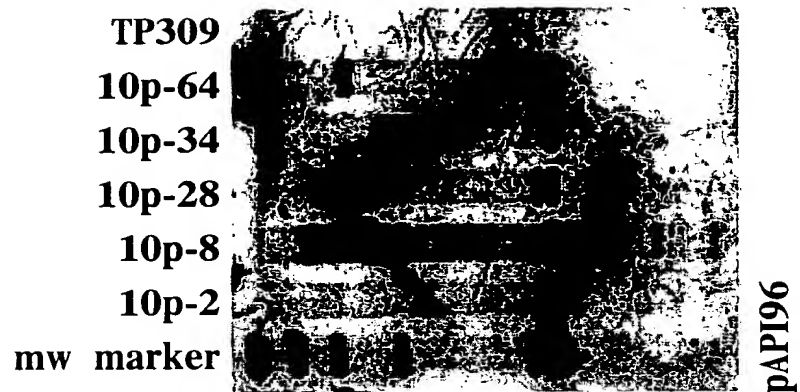


Fig. 2C

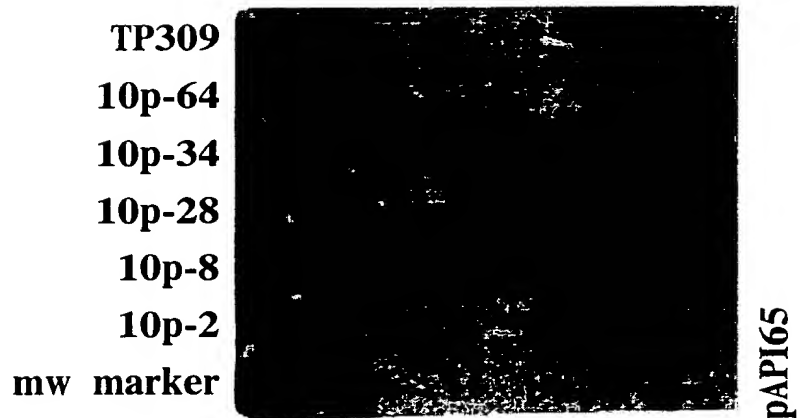


Fig. 2B

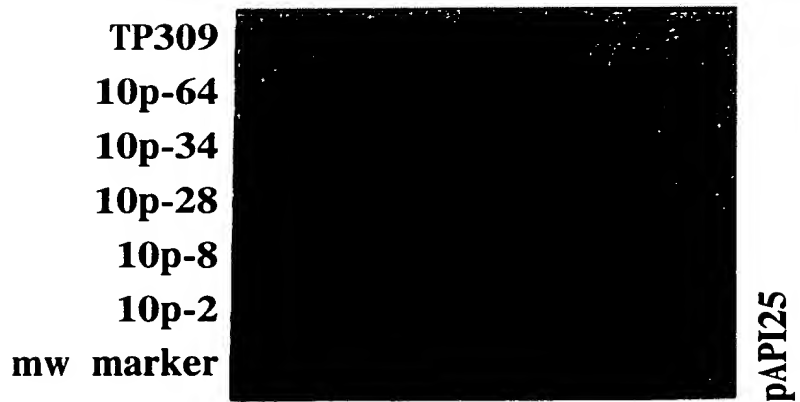


Fig. 2A

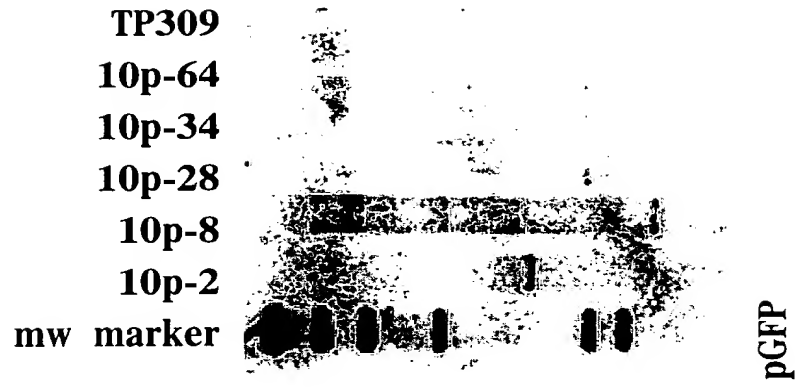


Fig. 2F

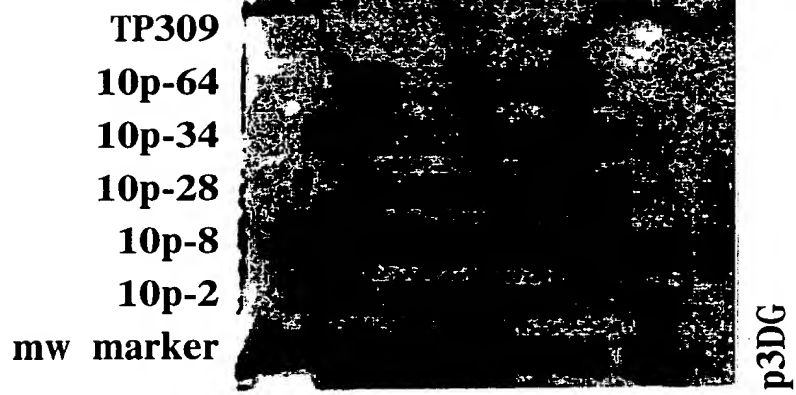


Fig. 2E

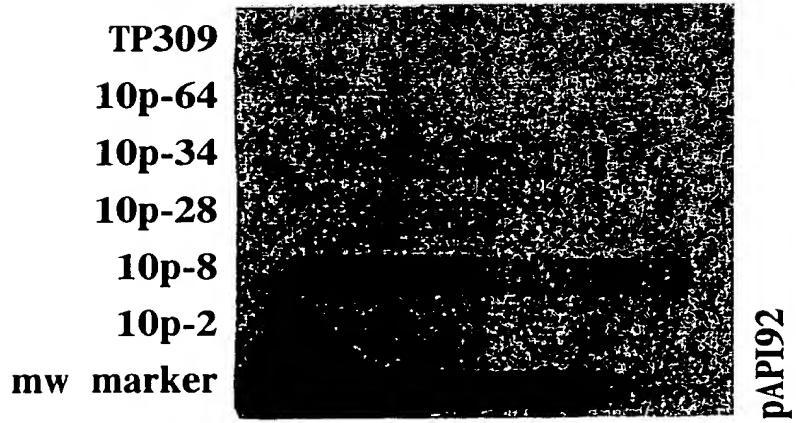


Fig. 2D

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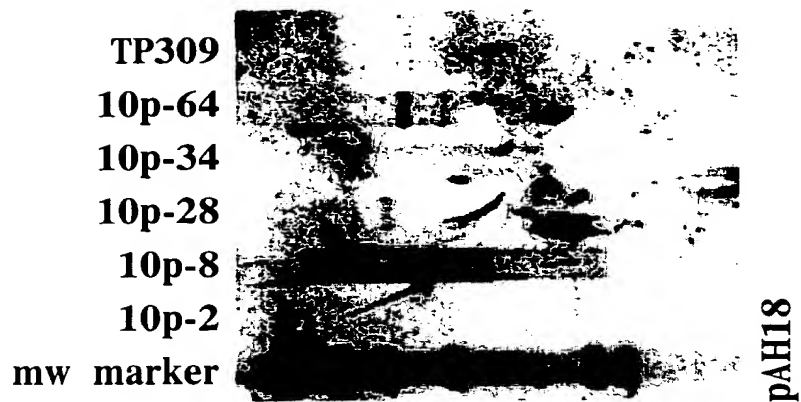


Fig. 2I

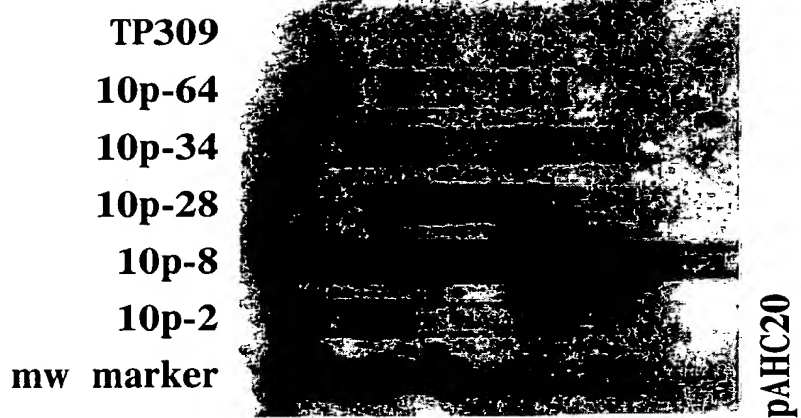


Fig. 2H

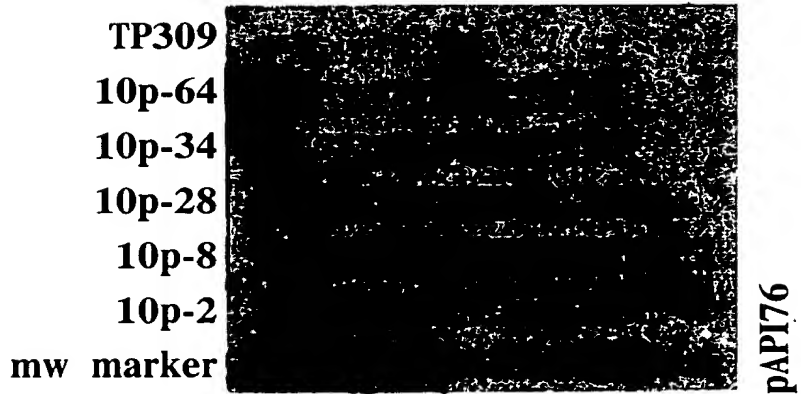


Fig. 2G

TP309 100-53 100-50 100-40 100-39 100-35 mw marker

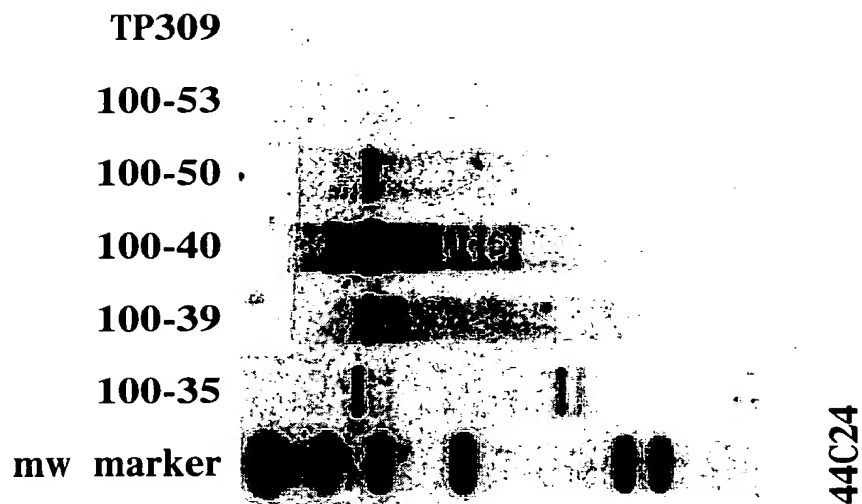


Fig. 4B

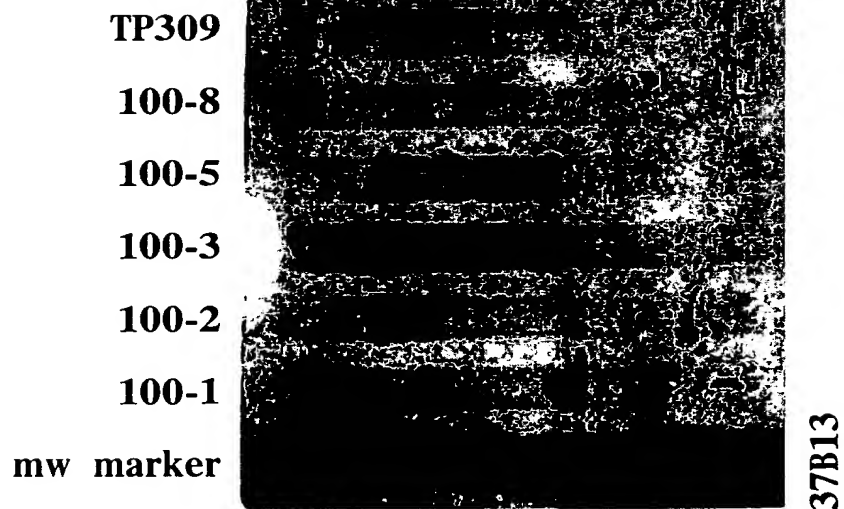


Fig. 4A

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      10      20      30      40      50      60      70
CACCTAAATTGTAAGCGTTAATATTTTGTAAAAATTCGCGTTAAATTTTGTAAATCAGCTCATTTTTT
GTGGATTTAACATTCGCAATTATAAAACAATTTTAAGCGCAATTTAAAAACAATTTAGTCGAGTAAAAA

      80      90     100     110     120     130     140
AACCAATAGGCCGAAATCGGCAAAATCCCTTATAAATCAAAGAATAGACCGAGATAGGGTTGAGTGTTG
TTGGTTATCCGGCTTTAGCCGTTTTAGGGAATATTTAGTTTTCTTATCTGGCTCTATCCCAACTCACAAC

      150     160     170     180     190     200     210
TTCCAGTTTGGACAAGAGTCCACTATTAAAGAACGTGGACTCCAACGTCAAAGGGCGAAAAACCGTCTA
AAGGTCAAACCTTGTTCTCAGGTGATAATTTCTTGCACCTGAGGTTGCAGTTTCCCGCTTTTGGCAGAT

      220     230     240     250     260     270     280
TCAGGGCGATGGCCCACTACGTGAACCATCACCTAATCAAGTTTTTTTGGGGTCGAGGTGCCGTAAAGCA
AGTCCCGCTACCGGGTGATGCACTTGGTAGTGGGATTAGTTCAAAAAACCCAGCTCCACGGCATTTCGT

      290     300     310     320     330     340     350
CTAAATCGGAACCCTAAAGGGAGCCCCGATTTAGAGCTTGACGGGGAAAGCCGGCGAACGTGGCGAGAA
GATTTAGCCTTGGGATTTCCCTCGGGGGCTAAATCTCGAACTGCCCTTTCGGCCGCTTGACCCGCTCTT

      360     370     380     390     400     410     420
AGGAAGGGAAGAAAGCGAAAGGAGCGGGCGCTAGGGCGCTGGCAAGTGTAGCGGTACGCTGCGCGTAAC
TCCTTCCCTTCTTTCGCTTTCCTCGCCGCGATCCCGCGACCGTTCACATCGCCAGTGCGACGCGCATTG

      430     440     450     460     470     480     490
CACCACACCCGCCGCGCTTAATGCGCCGCTACAGGGCGCGTCCCATTCGCCATTACAGGCTGCGCAACTGT
GTGGTGTGGGCGGCGCAATTACGCGGCGATGTCCCGCGCAGGGTAAGCGGTAAGTCCGACGCGTTGACA

      500     510     520     530     540     550     560
TGGGAAGGGCGATCGGTGCGGGCCTCTTCGCTATTACGCCAGCTGGCGAAAGGGGGATGTGCTGCAAGGC
ACCCTTCCCGCTAGCCACGCCCGGAGAAGCGATAATGCGGTGACCGCTTTCCTCCCTACACGACGTTCCG

      570     580     590     600     610     620     630
GATTAAGTTGGGTAACGCCAGGGTTTTCCAGTCACGACGTTGTAAAACGACGGCCAGTGAATTGTAATA
CTAATTCAACCCATTGCGGTCCCAAAAGGGTCAGTGCTGCAACATTTTGCTGCCGGTCACTTAACATTAT

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      |
      640     650     660     670     680     690     700
CGACTCACTATAGGGCGAATTGGAGCTCAACTTTAGTCCATATATTTAGACACTAATTTAGAGTATTAAA
GCTGAGTGATATCCCGCTTAACCTCGAGTTGAAATCAGGTATATAAATCTGTGATTAAATCTCATAATTT

      710     720     730     740     750     760     770
TATAAATTACTTACAAAATAATTCAATAAATGAAAGCTAATTTGCGAGACAAATTTTTTATGTTTAATT
ATATTTAATGAATGTTTTGATTAAGTTATTTACTTTCGATTAAACGCTCTGTTTAAAAAATACAAATTAA
```

FIG. 5A

780	790	800	810	820	830	840
AATCCATAATTAGAGAATGTTTACTGTAGCATCACATAGACTAATCATGGATTAATTAGGCTCAATAGAT						
TTAGGTATTAATCTCTTACAAATGACATCGTAGTGTATCTGATTAGTACCTAATTAATCCGAGTTATCTA						
850	860	870	880	890	900	910
TCGTCTCGTGAATTAGTCCAAGATTATGGATGGATTTTATTAATAGTCTACGTTTAATATTTATAATTAG						
AGCAGAGCACTTAATCAGGTTCTAATACCTACCTAAAATAATTATCAGATGCAAATTATAAATATTAATC						
920	930	940	950	960	970	980
TGTTCAAACATCCGATGTGATAGGGACTTAAAAAGTTTtagTCCCATCTAAACAGGGCCACAGTCTATGTG						
ACAAGTTTGTAGGCTACACTATCCCTGAATTTTCAAATCAGGGTAGATTTGTCCCGGTGTCAGATACAC						
990	1000	1010	1020	1030	1040	1050
GAGCATGTTCAACGAACACCGATAAATATTGCAAAGCCCAGAATGATTTTGGTCCCACATGCCAGAACT						
CTCGTACAAGTGGCTTGTGGCTATTTATAACGTTTCGGGTCTTACTAAACCAGGGTGTACGGTCTTTGA						
1060	1070	1080	1090	1100	1110	1120
ACCACACCCACATTTTCGGTTCATTTTCAGCTCAGGAAAATCGTCCAACAATTTTCAGCTCAGGAAATTAA						
TGGTGTGGGTGTAAAGCCAAGTAAAAGTCGAGTCCTTTTAGCAGGTTGTTAAAGTCGAGTCCTTTAATTT						
1130	1140	1150	1160	1170	1180	1190
TCGTCCGAGAAAGGAACAAGTTTGGAGCCGTTGGGATGAGAGCAATTAGGTCACGCTTAACTACAAGTAC						
AGCAGGCTCTTTCCTTGTTCAAACCTCGGCAACCCTACTCTCGTTAATCCAGTGCGAATTGATGTTCATG						
1200	1210	1220	1230	1240	1250	1260
AGTCTCATTCATCGACATTGATTAGCCAGCAACTAACCCTTAACCCCGAGCCAGCCCAAGCGCTCCGTA						
TCAGAGTAAGTAGCTGTAACATAATCGGTCGTTGATTGGTGAATTGGGGCTCGGTTCGGGTTTCGCGAGGCAT						
1270	1280	1290	1300	1310	1320	1330
CGTTTCGTTGGGCCCCCGCCGCGCAGGCGGAGACAACGGTCATCCGGCGCGCCGGTCGCTCTCCCTCGCTC						
GCAAGCAACCCGGGGGCGGCGCGTCCGCCTCTGTTGCCAGTAGGCCGCGCGGCCAGCGAGAGGGAGCGAG						
1340	1350	1360	1370	1380	1390	1400
GCACGGCCGCAACCAACCACTTCGCCACGAACCCGACGCGAGCGCGACGTGCATCTCCCAACATCCCCGCC						
CGTGCCGGCGGTGGTGGGTGAAGCGGTGCTTGGGCTGCGCTCGCGCTGCACGTAGAGGGTTGTAGGGGCGG						
1410	1420	1430	1440	1450	1460	1470
ATTTCTCTCCCAACCAAAACCAACCCGCCCGCGTGC GGCTGGCCCACTTTACAGCGCCTCACCTCCCCA						
TAAAGGAGGGGTGGGTTTGGTTGGGCGGGCGCACGCCGACCGGGTGAAATGTTCGCGGAGTGAGAGGGGT						
1480	1490	1500	1510	1520	1530	1540
ACCATAAATCCCCGCCCTTTTCCCCCCTCTCCACCACTCACCACGCTCTCCACTACACGACTCGTCCGC						
TGGTATTTAGGGGCGGGAAAAGGGGGGGAGAGGTGGTGAGTGGTGCGAGAGGTGATGTGCTGAGCAGCGG						
1550	1560	1570	1580	1590	1600	1610
GTCTTGCTCTGCTGCCCTCTCGCGCCCGCGCAGCAGTGAGCAGCAGCAAGAGCAGTCTAGGGGGATCTACC						
CAGAACGAGACGACGGAGAGCGCGGGCGCGTCGTCCTCGTCGTCGTTCTCGTCAGATCCCCCTAGATGG						

FIG. 5B

1620 1630 1640 1650 1660
ATG AGC CCA GAA CGA CGC CCG GCC GAC ATC CGC CGT GCC ACC GAG GCG GAC ATG
TAC TCG GGT CTT GCT GCG GGC CGG CTG TAG GCG GCA CGG TGG CTC CGC CTG TAC
M S P E R R P A D I R R A T E A D M>
__a__>

1670 1680 1690 1700 1710
CCG GCG GTC TGC ACC ATC GTC AAC CAC TAC ATC GAG ACA AGC ACG GTC AAC TTC
GGC CGC CAG ACG TGG TAG CAG TTG GTG ATG TAG CTC TGT TCG TGC CAG TTG AAG
P A V C T I V N H Y I E T S T V N F>
__a__>

1720 1730 1740 1750 1760
1770
CGT ACC GAG CCG CAG GAA CCG CAG GAG TGG ACG GAC GAC CTC GTC CGT CTG CGG
GCA TGG CTC GGC GTC CTT GGC GTC CTC ACC TGC CTG CTG GAG CAG GCA GAC GCC
R T E P Q E P Q E W T D D L V R L R>
__a__>

1780 1790 1800 1810 1820
GAG CGC TAT CCC TGG CTC GTC GCC GAG GTG GAC GGC GAG GTC GCC GGC ATC GCC
CTC GCG ATA GGG ACC GAG CAG CGG CTC CAC CTG CCG CTC CAG CGG CCG TAG CGG
E R Y P W L V A E V D G E V A G I A>
__a__>

1830 1840 1850 1860 1870 1880
TAC GCG GGC CCC TGG AAG GCA CGC AAC GCC TAC GAC TGG ACG GCC GAG TCG ACC
ATG CGC CCG GGG ACC TTC CGT GCG TTG CGG ATG CTG ACC TGC CGG CTC AGC TGG
Y A G P W K A R N A Y D W T A E S T>
__a__>

1890 1900 1910 1920 1930
GTG TAC GTC TCC CCC CGC CAC CAG CGG ACG GGA CTG GGC TCC ACG CTC TAC ACC
CAC ATG CAG AGG GGG GCG GTG GTC GCC TGC CCT GAC CCG AGG TGC GAG ATG TGG
V Y V S P R H Q R T G L G S T L Y T>
__a__>

1940 1950 1960 1970 1980
CAC CTG CTG AAG TCC CTG GAG GCA CAG GGC TTC AAG AGC GTG GTC GCT GTC ATC
GTG GAC GAC TTC AGG GAC CTC CGT GTC CCG AAG TTC TCG CAC CAG CGA CAG TAG
H L L K S L E A Q G F K S V V A V I>
__a__>

1990 2000 2010 2020 2030
2040
GGG CTG CCC AAC GAC CCG AGC GTG CGC ATG CAC GAG GCG CTC GGA TAT GCC CCC
CCC GAC GGG TTG CTG GGC TCG CAC GCG TAC GTG CTC CGC GAG CCT ATA CGG GGG
G L P N D P S V R M H E A L G Y A P>
__a__>

FIG. 5C

2670 2680 2690 2700 2710 2720 2730
 TAACTCACATTAATTGCGTTGCGCTCACTGCCCCGCTTTCCAGTCGGGAAACCTGTCGTGCCAGCTGCATT
 ATTGAGTGTAATTAACGCAACGCGAGTGACGGGCGAAAGGTCAGCCCTTTGGACAGCACGGTCGACGTAA

 2740 2750 2760 2770 2780 2790 2800
 AATGAATCGGCCAACGCGCGGGGAGAGGCGGTTTTCGTATTGGGCGCTCTTCCGCTTCCTCGCTCACTGA
 TTACTTAGCCGGTTGCGCGCCCCCTCTCCGCCAAACGCATAAACC CGGAGAAAGGCGAAGGAGCGAGTGA

 2810 2820 2830 2840 2850 2860 2870
 CTCGTGCGCTCGGTCTGCTCGGCTGCGGCGAGCGGTATCAGCTCACTCAAAGGCGGTAATACGGTTATCC
 GAGCGACGCGAGCCAGCAAGCCGACGCCGCTCGCCATAGTCGAGTGAGTTTCCGCCATTATGCCAATAGG

 2880 2890 2900 2910 2920 2930 2940
 ACAGAATCAGGGGATAACGCAGGAAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAA
 TGTCTTAGTCCCCATTGCGTCCTTTCTTGTAACACTCGTTTTCCGGTCGTTTTCCGGTCCTTGGCATTTT

 2950 2960 2970 2980 2990 3000 3010
 AGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAG
 TCCGGCGCAACGACCGCAAAAAGGTATCCGAGGCGGGGGGACTGCTCGTAGTGTTTTTAGCTGCGAGTTC

 3020 3030 3040 3050 3060 3070 3080
 TCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTTCCCCCTGGAAGCTCCCTCGTGCGC
 AGTCTCCACCGCTTTGGGCTGTCCTGATATTTCTATGGTCCGCAAAGGGGGACCTTCGAGGGAGCACGCG

 3090 3100 3110 3120 3130 3140 3150
 TCTCCTGTTCCGACCCTGCCGCTTACCGGATACCTGTCCGCCTTTCTCCCTTCGGGAAGCGTGGCGCTTT
 AGAGGACAAGGCTGGGACGGCGAATGGCCTATGGACAGGCGGAAAGAGGGAAGCCCTTCGCACCGCGAAA

 3160 3170 3180 3190 3200 3210 3220
 CTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTG TAGGTGCTTCGCTCCAAGCTGGGCTGTGTGCACGA
 GAGTATCGAGTGCGACATCCATAGAGTCAAGCCACATCCAGCAAGCGAGGTTGACCCGACACACGTGCT

 3230 3240 3250 3260 3270 3280 3290
 ACCCCCCGTTTACGCCCCGACCGCTGCGCCTTATCCGGTAACCTATCGTCTTGAGTCCAACCCGGTAAGACAC
 TGGGGGGCAAGTCGGGCTGGCGACGCGGAATAGGCCATTGATAGCAGAACTCAGGTTGGGCCATTCTGTG

 3300 3310 3320 3330 3340 3350 3360
 GACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAG
 CTGAATAGCGGTGACCGTCGTCGGTGACCATTTGTCTTAATCGTCTCGCTCCATACATCCGCCACGATGTC

 3370 3380 3390 3400 3410 3420 3430
 AGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGGACAGTATTTGGTATCTGCGCTCTGCTGAA
 TCAAGAACTTCACCACCGGATTGATGCCGATGTGATCTTCTGTGCATAAACCATAGACGCGAGACGACTT

 3440 3450 3460 3470 3480 3490 3500
 GCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGT
 CGGTCAATGGAAGCCTTTTTCTCAACCATCGAGAACTAGGCCGTTTGTGTTGGTGGCGACCATCGCCACCA

FIG. 5E

3510 3520 3530 3540 3550 3560 3570
 TTTTTTGTGGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTA
 AAAAAACAAACGTTTCGTCTAATGCGCGTCTTTTTTCTAGAGTTCTTCTAGGAACTAGAAAAGAT

 3580 3590 3600 3610 3620 3630 3640
 CGGGGTCTGACGCTCAGTGAACGAAACTCACGTTAAGGGATTTTGGTCATGAGATTATCAAAAAGGAT
 GCCCCAGACTGCGAGTCACCTTGCTTTGAGTGCAATTCCTAAAACCAGTACTCTAATAGTTTTTCCTA

 3650 3660 3670 3680 3690 3700 3710
 CTTACCTAGATCCTTTTAAATTAAAAATGAAGTTTAAATCAATCTAAAGTATATATGAGTAACTTGG
 GAAGTGGATCTAGGAAAATTTAATTTTACTTCAAATTTAGTTAGATTTCATATATACTCATTTGAACC

 3720 3730 3740 3750 3760 3770 3780
 TCTGACAGTTACCAATGCTTAATCAGTGAGGCACCTATCTCAGCGATCTGTCTATTTTCGTTTCATCCATAG
 AGACTGTCAATGGTTACGAATTAGTCACTCCGTGGATAGAGTCGCTAGACAGATAAAGCAAGTAGGTATC

 3790 3800 3810 3820 3830 3840 3850
 TTGCCTGACTCCCCGTCGTGTAGATAACTACGATACGGGAGGGCTTACCATCTGGCCCCAGTGCTGCAAT
 AACGGACTGAGGGGCAGCACATCTATTGATGCTATGCCCTCCCGAATGGTAGACCGGGGTACGACGTTA

 3860 3870 3880 3890 3900 3910 3920
 GATACCGCGAGACCCACGCTCACCGGCTCCAGATTTATCAGCAATAAACCAGCCAGCCGGAAGGGCCGAG
 CTATGGCGCTCTGGGTGCGAGTGGCCGAGGTCTAAATAGTCGTTATTTGGTCGGTCGGCCTTCCCGGCTC

 3930 3940 3950 3960 3970 3980 3990
 CGCAGAAGTGGTCCTGCAACTTTATCCGCCTCCATCCAGTCTATTAATTGTTGCCGGAAGCTAGAGTAA
 GCGTCTTACCAGGACGTTGAAATAGGCGGAGGTAGGTAGGATCAATAAACAACGGCCCTTCGATCTCATT

 4000 4010 4020 4030 4040 4050 4060
 GTAGTTCGCCAGTTAATAGTTTGCAGCAACGTTGTTGCCATTGCTACAGGCATCGTGGTGTCACGCTCGTC
 CATCAAGCGGTCAATTATCAAACGCGTTGCAACAACGGTAACGATGTCCGTAGCACCACAGTGCGAGCAG

 4070 4080 4090 4100 4110 4120 4130
 GTTTGGTATGGCTTCATTCAGCTCCGGTTCCTAACGATCAAGGCGAGTTACATGATCCCCCATGTTGTGC
 CAAACCATAACCGAAGTAAGTCGAGGCCAAGGGTTGCTAGTTCCGCTCAATGTACTAGGGGGTACAACAG

 4140 4150 4160 4170 4180 4190 4200
 AAAAAAGCGGTTAGCTCCTTCGGTCCTCCGATCGTTGTCAGAAGTAAGTTGGCCGAGTGTTATCACTCA
 TTTTTTCGCCAATCGAGGAAGCCAGGAGGCTAGCAACAGTCTTCATTCAACCGGCGTCACAATAGTGAGT

 4210 4220 4230 4240 4250 4260 4270
 TGGTTATGGCAGCACTGCATAATTCTTACTGTGTCATGCCATCCGTAAGATGCTTTTCTGTGACTGGTGA
 ACCAATACCGTCGTGACGTATTAAGAGAATGACAGTACGGTAGGCATTCTACGAAAAGACACTGACCACT

 4280 4290 4300 4310 4320 4330 4340
 GTACTCAACCAAGTCATTCTGAGAATAGTGTATGCGGCGACCGAGTTGCTCTTGCCCGGCGTCAATACGG
 CATGAGTTGGTTCAGTAAGACTCTTATCACATACGCCGCTGGCTCAACGAGAACGGGCCGAGTTATGCC

FIG. 5F

4350 4360 4370 4380 4390 4400 4410
 GATAATACCGCGCCACATAGCAGAACTTTAAAAGTGCTCATCATTGGAAAACGTTCTTCGGGGCGAAAAC
 CTATTATGGCGCGGTGTATCGTCTTGAAATTTTCACGAGTAGTAACCTTTTGCAAGAAGCCCCGCTTTTG

 4420 4430 4440 4450 4460 4470 4480
 TCTCAAGGATCTTACCGCTGTTGAGATCCAGTTCGATGTAACCCACTCGTGCACCCAACTGATCTTCAGC
 AGAGTTCCTAGAATGGCGACAACCTTAGGTCAAGCTACATTGGGTGAGCACGTGGGTGACTAGAAAGTCG

 4490 4500 4510 4520 4530 4540 4550
 ATCTTTTACTTTACACGCGTTTCTGGGTGAGCAAAAACAGGAAGGCAAAATGCCGCAAAAAGGGAATA
 TAGAAAATGAAAGTGGTCGCAAAGACCCACTCGTTTTTGTCTTCCGTTTTACGGCGTTTTTTCCTTAT

 4560 4570 4580 4590 4600 4610 4620
 AGGGCGACACGGAAATGTTGAATACTCATACTCTTCCTTTTTCAATATTATTGAAGCATTTATCAGGGTT
 TCCCGCTGTGCCTTTACAACCTTATGAGTATGAGAAGGAAAAAGTTATAATAACTTCGTAAATAGTCCCAA

 4630 4640 4650 4660 4670 4680 4690
 ATTGTCCTCATGAGCGGATACATATTTGAATGTATTTAGAAAAATAAACAAATAGGGGTTCGCGCACATT
 TAACAGAGTACTCGCCTATGTATAAACTTACATAAATCTTTTTATTTGTTTATCCCCAAGGCGCGTGTA

 4700
 TCCCCGAAAAGTGC
 AGGGGCTTTTCACG

FIG. 5G

10/180" 8222660